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ABSTRACT

Conducted as part of a research program examining teachers' use of compliance gaining strategies to control specific student misbehaviors, a study investigated the strategies used by experienced teachers in dealing with student misbehaviors. The purpose was to compare the findings with those of an earlier study with prospective teachers. Subjects were 541 elementary and secondary school teachers, each with two or more years of teaching experience. All subjects completed a packet of survey instruments that elicited demographic information as well as teacher use of specific behavior alteration techniques. They were then given four student misbehavior scenarios reflecting (1) common discipline problems, (2) both active and passive misbehavior types, and (3) moderate to severe misbehavior intensity. Results showed that experienced teachers used a greater frequency and diversity of behavior alteration techniques than did the prospective teachers in the earlier study. In addition, unlike the prospective teachers, experienced teachers' reports of strategy use were, in part, a function of misbehavior type, teacher gender, and grade taught. (Copies of the scenarios are appended, and references and tables are included.) (FL)

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Experienced Teachers' Use of Behavior Alteration Techniques on Common Student Misbehaviors

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Running Head: EXPERIENCED TEACHERS

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Experienced Teachers' Use of Behavior Alteration Techniques on Common Student Misbehaviors

Abstract

This study is the second in a program focusing on teachers' use of compliance-gaining strategies to control specific student misbehaviors. Whereas Study 1 (Plax, Kearney & Tucker, in press-a) examined prospective teachers' intended use of control, this investigation elicited the strategy use of experienced teachers' with identical student behaviors. Employing a typology of active/passive misbehavior types and moderate/severe intensities, results indicated that experienced teachers reported using both a greater frequency and diversity of BATs than' did prospective teachers. Moreover, unlike prospective teachers, experienced teachers' reports of selective strategy use were, in part, a function of misbehavior type, teacher gender and grade level taught. Discussion centers on recommendations for teacher training that may assist new teachers' development of appropriate classroom management schemes essential for adaptation to the realities of the classroom.

Experienced Teachers' Use of Behavior Alteration Techniques on Common Student Misbehaviors

The realities of actually dealing with students often destroy teachers' ideal images of their chosen profession. Overestimating students' natural desire to learn coupled with a dedication to foster such learning, teachers often report surprise and anxiety when they encounter student apathy, reluctance, or active resistance (Applegate, Flora, Johnston, Lasley, Mager, Newman, & Ryan, 1977; Ryan, 1974). A number of studies have examined the developmental changes of preservice, beginning, and experienced teachers as they attempt to adapt to the demands of the classroom (Driscoll, 1983; Hoy, 1967, 1969; Jones, 1982; Page & Page, 1981; Roberts & Blankenship, 1970). Such research objectifies a primary teacher frustration: The practice of teaching is often far removed from teacher training.

One overwhelming challenge to teachers is practicing effective classroom management skills. Recognizing that students' time spent on-task is the single best predictor of learning (Denham & Lieberman, 1980; McGarity & Butts, 1984; Rosenshine, 1979; Woolfolk & McCune-Nicolich, 1984), the teacher must direct attention to those learning activities and control strategies that elicit and maintain students' academic engagement time. Of all the potential concerns of beginning teachers, classroom management skills have been consistently identified as their primary inadequacy and consequently, their major source of frustration (Applegate & Lasley, 1979; Driscoll, 1983). In an effort to prepare teachers for the actual dynamics of the classroom, instructional communication researchers have identified a number of message-based control strategies which can contribute to a well-managed

classroom (Kearney, Plax, McCroskey & Richmond, 1984, 1985). Such strategies or Behavior Alteration Techniques are designed to influence student on-task compliance essential for cognitive learning (Richmond, McCroskey, Kearney & Plax, 1985).

Recognizing that prospective or inexperienced teachers may differ substantially from experienced teachers in their perceptions of student control, the present investigation extends our research program on Behavior Alteration Techniques by examining those strategies experienced teachers employ to handle specific misbehavior types and intensities. Whereas Study 1 (Plax, Kearney & Tucker, in press-a) focused on prospective teachers' use of control, Study 2 examined what experienced teachers report they would use to effectively manage particular student misbehaviors. Taken together, the results of both investigations will enable us to make more precise recommendations for supplementing teacher training programs. The process of developing appropriate, sophisticated schemes for gaining student compliance is particularly pertinent to understanding the differences between prospective and experienced teachers' handling of specific student misbehaviors.

Schemes for Classroom Management

The work of cognitive psychologists provides the guidance for understanding how teachers develop a working approach for handling student misbehaviors. For example, Greeno (1980), Rumelhart and Ortony (1977), and Piaget (1954, 1963, 1970) assert that individuals employ cognitive "schemes" to organize and make sense out of their environment. Such schemes are constantly changing to meet the demands of actual events individuals encounter. That is, schemes change and develop from very simple patterns to rather complex organizing systems. Combining and coordinating existing schemes to fit reality enables individuals to

become more sophisticated in their understanding of events and thus, potentially more effective at adaptation.

Developing well-integrated, complex schemes for understanding classroom management is essential for effective adaptation to the classroom environment. Significantly, beginning teachers are often retained or terminated on the basis of their ability to effectively manage students (Hoy, 1968). Because a given scheme acts as an explanation of what should occur in the classroom, it is important for teachers to develop a thorough understanding of what students are like; how they behave; what kinds of problems to expect; what strategies are available for managing discipline; and which strategies are most and least effective when handling specific student misbehaviors.

Following from the work of Piaget (1954, 1963, 1970), teachers may refine or expand existing schemes through three primary ways: activity, social transmission, and equilibration. All three emphasize active interaction with the classroom environment. For instance, activity requires that teachers assertively confront a diversity of student on- and off-task behaviors for scheme development. That is, teachers must encounter actual student misbehaviors in order to develop an understanding about what should as opposed to what does occur in the classroom. Social transmission involves scheme integration through modeling or discussion of other teachers' management of student disruptions. Equilibration refers to our basic need to actively search for balance or equilibrium when confronted with conflicting data. If a particular classroom management scheme is applied to specific student misbehaviors and it works, equilibrium exists. However, if that scheme is applied to other misbehaviors and the results are not satisfying (i.e., disequilibration), teachers are compelled to modify their

existing management scheme or create a new disciplinary approach.

In their development of classroom management schemes then, prospective teachers may have initial schemes that potentially constrain their ability to adapt effectively to the classroom. With little or no opportunity for activity, social transmission, or disequilibration, new teachers may be limited in their understanding of classroom management. Having had little or no contact with actual student misbehaviors, new teachers may rely on their own personal experiences as students themselves. Such reflected experiences are not only restricted in their representativeness of all student misbehaviors, but potentially distorted as well. In terms of social transmission, many teachers are offered only limited preservice training in classroom management skills (Plax et al., in press-a). Finally, new teachers lack sufficient classroom management experiences to "test out" their existing schemes for handling student disruptions. Consequently, there is little or no opportunity for disequilibration to occur.

Having no "need" or "opportunity" then, for modifying existing classroom management schemes, beginning teachers may enter the classroom with inappropriate, over-simplified schemes for handling student behavior. In contrast, experienced teachers have had numerous opportunities for scheme development. Encountering actual student contact, directional feedback from other teachers and administrators, and student resistance to their management attempts, experienced teachers may develop well-integrated, sophisticated schemes for classroom management.

In support of this interpretation, a number of studies point to developmental differences in teachers' approach to student discipline. First, preteachers and experienced teachers fail to prioritize student

discipline similarly. Whereas experienced teachers overwhelmingly (95%) maintain that discipline should be a primary discouraging factor in decisions to enter the profession, less than half of the preteachers sampled believed discipline problems should be criterial in their career decisions (Page & Page, 1981). Of the 1,981 elementary and secondary teachers surveyed, student apathy and discipline continue to be the most serious problems classroom managers face (Metropolitan Life Survey, 1984). To lend further support for the disparity between preteachers' and experienced teachers' perceptions of student discipline, teachers who leave the profession cite conflicts with students and the resulting anxiety associated with their inadequacy to handle those conflicts as a primary reason for their disassociation (Applegate & Lasley, 1979)

Second, inexperienced and experienced teachers' control orientations differ substantially. According to Hoy (1967), teacher training programs typically socialize prospective teachers with a humanistic control orientation. An orientation that stresses the importance of teacher confidence and trust toward students, the humanistic perspective advocates the use of supportive, helpful control techniques. Adopting a classroom management scheme of permissiveness, beginning teachers often enter the classroom ill-equipped to meet the disciplinary challenges of their students. Developmental research on teacher socialization, (Hoy, 1967, 1969; Jones, 1982; Roberts & Blankenship, 1970), indicates that inexperienced teachers gradually adopt an increasingly more custodial or authoritarian scheme not unlike that of many experienced teachers.

Third, the literature suggests that teachers' concerns about teaching differ developmentally. Primary to preteachers are concerns about whether students like them or their ability to respond accurately

to students' questions. Student teachers turn their concerns toward the actual task of teaching (e.g., lecturing, activities). Experienced teachers' concerns are more student-centered, focusing attention on learning outcomes (Fuller, 1969; Fuller & Brown, 1975; Fuller, Watkins, & Parsons, 1973). Similarly, Staton-Spicer and Bassett (1979) found that teachers' communication concerns followed a parallel pattern. These authors reasoned that new teachers are learning and familiarizing themselves with their teaching role. This process of role acquisition requires selective attention to particular aspects of those collective behaviors that define their emerging teacher role. Stated differently, beginning teachers may be confronted with specific classroom situations that demand restructuring of their initial schemes. Active interaction with the classroom environment may initiate disequilibration of prior schemes and thus, focus attention to specific teacher concerns. In this way, such concerns become "constructive frustrations" (Fuller, 1970, p. 11) in teachers' adaptative attempts to control their environment.

Rationale and Research Questions

Assuming that classroom management schemes direct teachers' decisions in their selection of strategies to modify student behavior, this research program was designed to examine prospective and experienced teachers' use of Behavior Alteration Techniques (BATs). Study 1 (Plax, Kearney & Tucker, in press-a) examined prospective teachers' decisions to use particular BATs to control specific student misbehaviors. The results of that study suggest that prospective teachers have rather limited, restricted schemes for classroom control. That is, preteachers reported they would make limited use of the variety of BATs available in controlling particular in-class student misbehaviors. Projecting a reliance on only two strategies to modify

misbehavior, preteachers also reported they would never, or only occasionally, use the remaining twenty available BATs.

In extension of Study 1, Study 2 was designed to examine experienced teachers' decisions to use particular BATs to control specific student misbehaviors. Unlike the results of Study 1, prior research on experienced teachers and their students revealed that they use a variety of BATs for student control (Kearney et al., 1984, 1985; McCroskey, Richmond, Plax, & Kearney, 1985; Plax, Kearney, McCroskey, & Richmond, in press-b; Richmond et al., 1985). However, earlier research on BAT use relied on teachers' (or students') recall of BATs employed across all students misbehaviors generally. Without specific misbehaviors to anchor perceptions of BAT use, teachers were required to respond with more gestalt assessments of BAT use. For the most part, teachers do not select BATs with global outcomes in mind. Instead, choices are made with respect to given individual problems with students (McCroskey et al., 1985; Plax et al., in press-b). In extension of prior research then, this research program required teachers to focus on those BATs employed with particular student misbehaviors.

Assuming that experienced teachers (as opposed to inexperienced teachers) have more well-integrated cognitive schemes for classroom management, we might expect them to select a greater diversity of BATs to employ with specific student misbehaviors. That is, increased behavioral flexibility in handling individual student problems might also be associated with teachers' ability to adapt more readily to the demands of the classroom environment. As in the student misbehavior typology developed and validated in Study 1, specific misbehaviors most frequent and common across all grade levels (K-12) were identified as talking out of turn, overactivity, inattention to lesson, and student

apathy (Bellon, Doek, & Handler, 1979). Relying on all four misbehaviors as anchors for experienced teachers' responses to BAT use, the following research question was posited:

Research Question 1: Which Behavior Alteration Techniques (BATs) do experienced teachers report they would most and least likely use to control common student misbehaviors in the classroom?

A further indicator of complex classroom management scheme development may include discriminative selection of strategies designed to manage particular misbehavior types or intensities. Having confronted a variety of student misbehaviors in the classroom, experienced teachers may selectively employ those strategies that are optimally effective with specific kinds of off-task behaviors. Referencing the typology of student misbehaviors developed in Study 1, student behaviors can be classified as either active or passive types. According to Dreikurs, Grunwald and Pepper (1971), active misbehaviors operate overtly to disrupt learning, whereas passive misbehaviors are generally covert or suspended. Because the four most frequently occurring student misbehaviors (Bellon et al., 1979) can be classified as either active (talking out-of-turn and overactivity) or passive (inattention to lesson and student apathy), experienced teachers should have had numerous opportunities to develop appropriate classroom management schemes to handle each misbehavior type.

In terms of managing either misbehavior type, Dreikurs et al. (1971) maintain that experienced teachers are more likely to selectively attend to active, as opposed to passive, student misbehaviors in the classroom. Because active misbehaviors are generally disruptive to the entire learning environment, immediate teacher desist attempts are

demanded. On the other hand, passive misbehaviors may not be as readily identified as either disruptive or off-task. Individual student inattention or apathy may be easily overlooked and thus, maintained indefinitely without immediate teacher attempts at behavior change. Consequently, a further differentiating factor in teacher selection of control strategies may reside with the intensity or duration of each misbehavior type (Brophy, 1983). Active or passive misbehaviors which have become severe, long-term learning problems as opposed to short-term, occasional disruptions, may prompt teachers to employ different management techniques.

In spite of these distinctions, preteachers failed to discriminate either between misbehavior type or intensity in their selection of BATs in Study 1. Instead, prospective teachers reported a reliance on the same two strategies. Anticipating that experienced teachers' classroom management schemes may allow them to make finer discriminations among particular student misbehavior types/intensities, the following research question was asked:

> Research Question 2: To what extent do experienced teachers' perceptions of BAT usage vary as a function of misbehavior type (active/passive) and/or intensity (moderate/severe)?

Study 1 also investigated whether prospective teachers' selection of BATs might be a function of students' gender. Assuming that teachers'management decisions would be influenced by the sex of the misbehaving student, results indicated that prospective teachers did not discriminate between males and females in their use of BATs. Nevertheless, the literature suggests that experienced teachers are more likely to show disapproval, give criticism, and engage in more overall negative contact with male than with female students (Brophy & Good,

1974; Good, Sikes & Brophy, 1973). Whether predisposed to discriminate between the sexes or not, actual contact with mixed-gender classes might lead teachers to modify their classroom management scheme to include a sex-based differentiation in their selection of strategies. As in research question two, both type and intensity of misbehaviors were considered. Thus,

Research Question 3: To what extent do experienced teachers' perceptions of BAT usage vary as a function of male as opposed to female student behaviors?

Although Study 1 did not to have a sufficient sample size of male preteachers to examine the effects of teacher gender on strategy selection, this study was designed to probe whether experienced teachers' classroom management schemes were influenced by sex of teacher. Prior research on BAT use across student behaviors generally indicated mixed results: Employing an initial BAT typology derived from student, rather than teacher, responses, instructor gender was not meaningfully associated with perceptions of BAT use (Kearney et al., 1985). However, a follow-up study which relied on an extended, instructor validated classroom-specific BAT typology indicated that female teachers perceived they used more reward or prosocial BAT types. In contrast, males reported using significantly more expert BAT types (Kearney et al., 1984). Because both of those studies were limited to asking teachers to respond to perceptions of BAT use across student misbehaviors generally, the following research question asked teachers to anchor their perceptions of BAT choice in particular misbehavior types and intensities:

Research Question 4: To what extent do perceptions of BAT use vary as a function of teacher gender?

A well-developed classroom management scheme might also include grade level taught as a potential influence on BAT selection. Once again, however, prospective teachers' anticipated grade level failed to enter into their decisions about the management of particular student misbehaviors. Relying on BAT use across misbehaviors generally, Kearney et al. (1984) found that experienced teachers in upper grade levels perceived themselves using more punishment or antisocial BAT types as well as expert-based BATs. Lower grade level teachers reported using more prosocial BAT types. While we might expect similar grade level-specific BAT choices in this study, experienced teachers may not differentiate among BATs when asked to respond to those misbehaviors which are common across all grade levels. Therefore,

Research Question 5: To what extent do experienced teachers perceptions of BAT usage vary as a function of grade level normally taught?

Methods

Subjects were 541 (430 females, 111 males) experienced elementary and secondary teachers enrolled in introductory graduate communication classes from a large Eastern university. In order to ensure that only "experienced" teachers participated, only Ss with two or more years of teaching were included in this study. One hundred sixty-six Ss taught grades K-3; 114 in grades 4-6; 123 in grades 7-9; 93 in grades 10-12; and 46 taught special subjects across grade levels.

The procedures and instruments employed in this study were similar to those used with prospective teachers in Study 1 (Plax et al., in press-a). All Ss completed a packet of survey materials which included a assessment of the grade level normally taught, years of teaching experience, and four student misbehavior scenarios followed by

instruments tapping BAT use. Subjects were told that the purpose of the study was to examine experienced teachers' use of classroom management techniques.

Stimulus Materials

Subjects were provided the same four student misbehavior scenarios employed in Study 1 (Plax et al., in press-a). Each scenario was written to reflect the following five criteria: First, each misbehavior represented a "common" student problem that both elementary and secondary teachers face. Second, scenarios reflected both active and passive misbehavior types (Dreikurs et al., 1971). Critical to both criteria, two of the most common misbehaviors reported by Bellon et al. (1979) reflected an active misbehavior type (talking out-of-turn and overactivity) and two reflected a passive type (inattention and apathy).

Third, each scenario varied in misbehavior intensity. Both apathy and overactivity have long-term consequences to student or peer learning, whereas inattention and talking out-of-turn are typically associated with short-term consequences. As a result, apathy and overactivity were labeled severe, whereas inattention and talking out-of-turn were labeled moderate intensities. Scenarios, then, represented more long-term misbehaviors (severe) as well as more occasional misbehaviors (moderate). Fourth, each scenario reflected "off-task" misbehaviors consistent with both the definition of classroom management (Emmer & Evertson, 1981) and misbehavior (Richmond & Andriate, 1982). Fifth, each scenario permitted the use of all 22 BATs and reflected universal misbehaviors applicable to grades K-12.[1] Subjects were instructed to "imagine that the student in each situation is in the grade level you normally teach." (See Figure 1).

Insert Figure 1 about here

As in Study 1, each scenario also reflected mixed-gender student roles. As a result, Ss responded to two male and two female students engaging in one of four scenarios. Gender roles were rotated for each of the four scenarios so that half of the Ss (N = 251) received male passive-severe, female active-moderate, male active-severe and female passive-moderate, while the other half (N = 289) received female passive-severe, male active-moderate, female active-severe and male passive-moderate.

Measuring Instrument

Following each stimulus misbehavior scenario, Ss were provided with separate sets of behavior alteration messages (BAMs) representing each of the twenty-two BATs generated by Kearney et al. (1984). BAT labels were not included on the quetionnaire. Subjects were asked to rate on a

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Insert Table 1 about here

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1 - 7 scale "how likely you would be to use each of the 22 message-based categories to influence the particular student in that situation." Higher scores indicated greater likelihood of use. Consistent with previous research on data obtained from both experienced teachers across all grade levels (Kearney et al., 1984, 1985; McCroskey et al., 1985; Plax et al., in press-b) and their students (McCroskey et al., 1985; Plax et al., in press-b), the BAT instrument represents 22 relatively independent message categories. Subjects responded to the questionnaire

four times, assessing their likelihood of use for each of the four misbehavior scenarios.

Results

The statistical analyses employed to answer the research questions which paralleled those in Study 1, were the same as those employed in that study (Plax et al., in press-a). Answering research question one required frequency analysis to determine the percentage of teachers reporting high (5, 6, 7) and low (1, 2, 3) likelihood of use for each BAT. Employing a majority percentage criterion, two BATs were reported to be most likely used across all four scenarios: Self-Esteem and Teacher Feedback. In addition, two other BATs were also reported most likely used for both passive misbehavior scenarios: Immediate Reward from Behavior and Deferred Reward from Behavior. Employing the same

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Insert Table 2 about here

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majority percentage criterion, ten BATs were reported as least likely used across all four scenarios: all three types of punishment BATs, Guilt, both Teacher/Student Relationship Positive and Negative BATs, both Legitimate Higher and Teacher Authority BATs, Debt and Altruism. In addition, Normative Rules was found to be least likely used for both passive misbehaviors and Teacher Modeling for passive/severe only.

Unlike the prospective teacher data which resulted in discrete, dichotomous categories of either high or low use, experienced teachers reported moderate to high use of additional BATs. With means approaching or above 4.0, this sample reported moderate use of all remaining 6 to 10 additional BATs. These results indicate that experienced teachers rely on a diversity of BATs to control particular

student misbehaviors.

Research question two was answered by probing BAT use differences across the four scenarios. Two separate MANOVAs were computed.[2] The first MANOVA compared all 22 BATs as a function of misbehavior type (active vs. passive); the second compared all 22 BATs as a function of intensity (moderate vs. severe). Because Ss responded to two active and two passive scenarios, response totals ranged from 2 (least likely to be used) to 14 (most likely to be used). This same additive procedure was employed for Ss' responses to the two mdoerate and two severe scenarios.

For the active versus passive condition, the resulting F was significant (Wilks' Lambda = .897, F = 5.42, df =22/1042, p<.0001). Follow-up univariate contrasts indicated that 14 BATs differed significantly by active/passive misbehavior type: All three reward BATs, Self-Esteem, and Teacher Feedback were reported as more likely used with active as opposed to passive misbehaviors. In contrast, Punishment from

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Insert Table 3 about here

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both Teacher and Others, Guilt, Teacher/Student Relationship: Negative, Legitimate Teacher Authority, Responsibility to Class, Normative Rules, Altruism, and Peer Modeling were reported as more likely to be used with passive as opposed to active misbehaviors. These results indicate that teachers are more likely to use prosocial-type BATs with active misbehaviors, but would use antisocial-type BATs with passive misbehaviors. The variance accounted for in these analyses, however, only ranges from 1 to slightly higher than 2 percent.

For the moderate versus severe condition, the resulting F was

nonsignificant (Wilks' Lambda = .975, F = 1.20, df = 22/1042, $p>.05$). Follow-up contrasts indicated that none of the 22 BATs differed as a function of moderate/severe intensity. Consequently, experienced teachers' BAT use does not appear to be a function of misbehavior intensity for these particular stimulus conditions.

For research question three, MANOVAs were computed comparing all 22 BATs as a function of student gender for each of the four scenarios. All four MANOVAs were nonsignificant at the .05 alpha level: Passive-severe, Wilks' Lambda = .951, F = 1.21, df = 22/516; active-moderate, Wilks' Lambda = .948, F =1.27, df = 22/513; active-severe, Wilks' Lambda = .947, F = 1.31, df = 22/513; passive-moderate, Wilks'Lambda = .957, F = 1.04, df = 22/509. Follow-up contrasts indicated that for the passive-severe condition, teachers reported greater likelihood of using Immediate Reward from Behavior (F = 4.57, df = 1/537, $p<.05$) with female students ($\bar{X}$ = 4.53) than with males ($\bar{X}$ = 4.18), but would be more likely to use Punishment from Teacher (F = 7.97, df = 1/537, $p<.01$) with males ($\bar{X}$ = 2.53) than with females ($\bar{X}$ = 2.14). For the active-moderate condition, teachers reported greater likelihood of using Punishment from Behavior (F = 4.05, df = 1/534, $p<.05$) with females ($\bar{X}$ = 2.89) than with males ($\bar{X}$ = 2.59), but would be more likely to use Responsibility to Class (F = 3.89, df = 1/534, $p<.05$) with males ($\bar{X}$ = 4.44) than with females ($\bar{X}$ = 4.15). For the active-severe condition, teachers reported greater likelihood of using Punishment from Teacher (F = 5.15, df = 1/534, $p<.05$) and Normative Rules (F = 4.63, df = 1/534, $p<.05$) with males ($\bar{X}$ = 2.61, 3.83, respectively) than with females ($\bar{X}$ = 2.26, 3.51, respectively). For the passive-moderate condition, teachers reported greater likelihood of using Normative Rules (F = 6.86, df = 1/530, $p<.01$) with males ($\bar{X}$ =

3.54) than with females (X = 3.15). The highest variance accounted for in these analyses, however, is just a little over one percent.

Research question four focused on differences in BAT usage as a function of experienced teacher gender. To test this possibility, discriminant analysis procedures were employed across male (N = 110) and female (N = 424) categorizations for each of the four misbehavior scenarios. In this way, teacher gender defined the classification (dependent) variable and teacher use of the 22 BATs defined the discriminant (independent) variables for each scenario.

For the passive-severe condition, a test of the overall discriminant model was significant [Wilks' Lambda = .84, F (22/514) = 4.35, R^2 = .16 on the first canonical root, $p<.00001$]. Unbiased percentage of correct classification in the male teacher category was 70% and in the female teacher category, 70%. The classification X for males was .844 and for females, -.220. In order to determine whether a linear combination of a smaller set of perceptions of BAT use would allow for similar correct classifications, a stepwise procedure using a maximum F-to-enter criterion was also performed. Results revealed that the use of 7 BATs produced similar correct classifications [Wilks' Lambda = .86, F (7/529) = 12.48, $p<.00001$]. The 7 BATs entered in the following order: BAT #2, 3, 5, 8, 13, 19 and 22 (see Table 1 for BAT labels). All 7 BATs were significant within this linear combination (univariate F's ranged from 3.63 to 27.54, all p's$<.05$). Standardized canonical coefficients on the first root associated with the 7 BATs were .224, -.285, -.440, .220, .416, .258 and -.345, respectively.

For the active-moderate condition, the overall discriminant model was significant [Wilks' Lambda = .83, F (22/511) = 4.67, R^2 = .17, $p<.00001$]. Unbiased percentage of correct classification in the male

teacher category was 73% and in the female teacher category, 74%. The classification X for males was .876 and for females, -.228. A stepwise discriminant procedure revealed that 7 BATs produced similar correct classifications [Wilks' Lambda = .86, $\underline{F}$ (7/526) = 12.78, p<.00001], and were entered in the following order: BAT #13, 5, 9, 21, 22, 17 and 3 (see Table 1 for BAT labels). All 7 BATs were significant within this linear combination (univariate $\underline{F}$'s ranged from 4.94 to 13.08, all p's<.05). Standardized canonical coefficients for the 7 BATs were .368, -.443, .202, .366, -.367, .345 and -.283, respectively.

For the active-severe condition, the overall discriminant model was significant [Wilks' Lambda = .83, $\underline{F}$ (22/511) = 4.81, $\underline{R}^2$ = .17, p<.00001]. Unbiased correct classification in the male teacher category was 70% and in the female teacher category, 72%. The classification X for males was .886 and for females, -.233. A stepwise discriminant procedure produced similar correct classifications with 8 BATs [Wilks' Lambda = .85, $\underline{F}$ (8/525) = 12.02, p<.00001], entering in the following order: BAT #8, 5, 20, 18, 16, 13, 17 and 3 (see Table 1 for BAT labels). All 8 BATs were significant within this linear combination (univariate $\underline{F}$'s ranged from 4.79 to 25.9, all p's<.05). Standardized canonical coefficients for the 8 BATs were .255, -.434, .188, .402, -.384, .359, .347 and -.264, respectively.

For the passive-moderate condition, the overall discriminant model was significant [Wilks' Lambda = .83, $\underline{F}$ (22/507) = 4.57, $\underline{R}^2$ = .17, p<.00001]. Unbiased correct classification in the male teacher category was 68% and in the female teacher category, 74%. The classification X for males was .879 and for females, -.225. A stepwise discriminant procedure produced similar correct classifications with 9 BATs [Wilks' Lambda = .85, $\underline{F}$ (9/520) = 10.62, p<.00001], entering in the following

order: BAT #11, 5, 13, 18, 16, 3, 2, 22 and 17 (see Table 1 for BAT labels). All 9 BATs were significant within this linear combination (univariate F's ranged from 4.82 to 34.63, all p's<.05). Standardized canonical coefficients for the 9 BATs were .332, -.373, .304, .416, -.379, -.334, .281, -.283 and .261, respectively.

In total, while all 22 BATs together significantly discriminated among male and female teachers for each of the four misbehavior scenarios, linear combinations of smaller sets of BATs appeared to provide the most parsimonious classifications.[3] Although the smaller sets of BATs differed somewhat for each scenario, the following trend emerged based on the magnitude and direction of the 4 sets of classification means (Tatsuoka, 1970, pp. 49-52): Overall, it appears that male teachers were classified more accurately by those BATs which were primarily antisocial (e.g., Debt, Guilt, Punishment from Others, Peer Modeling, Teacher/Student Relationship: Negative). Moreover, male teachers were more likely to use authority-based appeals (Expert Teacher, Teacher Modeling, Legitimate Teacher Authority). Only two prosocial type BATs were descriptive of male teachers: Altruism and Deferred Reward. Conversely, female teachers were classified more accurately by 3 prosocial or student-centered concern type BATs which consistently emerged across all 4 scenarios: Self-Esteem, Reward from Teacher, and Teacher Feedback. Only Normative Rules further classified female teachers.

Research question five focused on differences in BAT usage as a function of grade level normally taught (i.e., K-3, 4-6, 7-9, 10-12, "other"). MANOVAs were computed on teachers' responses to each of the scenarios on all 22 BATs. All four MANOVAs were significant at alpha level .0001: Passive-severe, Wilks' Lambda = .70, F = 2.18, df =

88/2027; active-moderate, Wilks' Lambda = .698, F = 2.18, df = 88/2015; active-severe, Wilks' Lambda = .745, F = 1.77, df = 88/2014; passive-moderate, Wilks' Lambda = .737, F = 1.81, df = 88/1999. Results of the follow-up analyses of variance are reported in Table 4. Twelve

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Insert Table 4 about here

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out of the 22 BATs were found to be significantly different across grade level taught for active-severe and passive-moderate; 13 out of 22 for passive-severe and active-moderate ($p<.05$, df = 4/533). The variance accounted for in these contrasts, however, is not particularly high, ranging from 2 to 6 percent. In addition, the only trend observed across all contrasts is that early elementary teachers reported a greater likelihood of using slightly more prosocial type BATs, whereas upper grade level teachers tended to rely on more antisocial type BATs.

Discussion

This research program was designed to examine differences across prospective and experienced teachers' perceptions of student control. Given that Study 1 (Plax et al., in press-a) indicated that prospective teachers reported limited use of the variety of BATs available in controlling particular in-class student misbehaviors, this second study investigated experienced teachers' perceptions of BAT use with identical student misbehaviors. Exposed to repeated incidences of student disruptions, peer teacher or administrator discussions on classroom management efforts, as well as trial-and-error control attempts, experienced teachers in this investigation reported that they would use a diversity of BATs to handle specific misbehaviors. Even though experienced teachers reported using the same two BATs identified by

prospective teachers in Study 1 (Self-Esteem and Teacher Feedback), this sample of experienced teachers indicated they would frequently use two additional BATs for passive misbehavior types: Immediate Reward from Behavior and Deferred Reward. A more dramatic comparison across the two studies, however, can be found in teachers' reports of moderate BAT use. Unlike prospective teachers who indicated infrequent or no use of 20 BATs, experienced teachers perceived they would select a substantial number of BATs to modify student misbehavior. As expected, these findings suggest that experienced teachers may acquire greater flexibility in their strategic handling of student disruptions.

Anticipating that experienced teachers' schemes for classroom management would predispose them to discriminate in their selection of BATs as a function of misbehavior type, these teachers reported a tendency to use more antisocial BATs with passive and more prosocial BATs with active misbehavior types. Even though variance accounted for was minimal, the obtained differences across 14 BATs indicates a potential trend that requires further and deeper investigation. Assuming the viability of Dreikurs' et al. (1971) claim that passive misbehaviors are more difficult to modify than active misbehaviors, the findings of this study evidence a potential teacher frustration with passive student non-compliance. Unable to elicit cooperation from passively resistant students, experienced teachers may occasionally resort to punishment-based BATs. In comparison to prospective teachers who failed to differentiate BAT use across misbehavior type, experienced teachers may recall those infrequent, but exasperating instances of non-compliance that required antisocial BAT use.

Obtaining no differences in selective BAT use as a function of misbehavior intensity in either study could be interpreted in one of two

ways. First, teachers may initially use similar strategies for either occasional or persistent student misbehaviors. Over time, however, teachers may resort to other control techniques that are not communication-based (e.g., "time-out" or other forms of extinction). Second, teachers may have been unable to discern noticeable differences in intensity in the written scenarios. The results of future investigations employing both more intense modifiers for the severe condition (e.g., "persistently restless" or "continually looking for an argument) and more explicit references of isolated disruptions for the moderate condition (e.g., "on those rare occasions" or "once in a while") may serve to assist teachers in their discriminations.

Also similar to those results obtained with prospective teachers, experienced teachers did not report selective BAT use as a function of students' gender. Even though prior research has noted observable differences in teachers' responses to male as opposed to female students (Brophy & Good, 1974; Good, Sikes & Brophy, 1973), teachers may not perceive or are reluctant to report that such sex-based discriminations occur. Selective BAT use does appear to be a function of teacher gender, however. Consistent with prior research (Kearney et al., 1984), female teachers reported a greater reliance on prosocial BAT types, whereas males relied on expert-based BATs. In addition, this sample of male teachers was more likely to use antisocial BATs in their control of specific student misbehaviors. Finding support for traditional gender-based stereotypes in teachers' BAT choices suggests that either teachers themselves promote such stereotypes or that students' willingness to comply is based on gender-specific strategy use.

Finally, experienced, as opposed to prospective, teachers reported differential BAT use as a function of grade level taught. While

variance accounted for was minimal, these results confirm earlier research (Kearney et al., 1984) which found teachers to rely on more prosocial strategies with younger children, but resort to more antisocial strategies with adolescents and young adults. Handling specific misbehaviors common to all grade levels then, appear to be somewhat tied to students' age.

Pertinent to recommendations for teacher training, the findings of this second study on experienced teachers' use of BATs confirm the need for prospective teacners' to engage in early experiences with actual student misbehaviors. Such "activity" and potentially, "disequilibration," may enable preteachers to refine and expand upon existing classroom management schemes. In addition, preteachers need greater opportunity for "social transmission" in their attempts to develop well-integrated schemes for appropriate adaptation to the demands of the classroom. Consequently, intensified coursework coupled with early experiences in classroom management should be requisite for teacher certification. Specific to compliance-gaining strategies appropriate to the classroom, preteachers should be exposed to the variety of BATs available; the relative effectiveness of each BAT as a function of students' grade level and misbehavior type; and the potential consequences associated with each BAT for both students' affective and cognitive learning. Such "preservice" training may provide beginning teachers with a more well-defined framework or scheme for handling student misbehaviors common to all classrooms.

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Footnotes

[1]Although Study 1 (Plax et al, in press-a) substantiated the validity of the student misbehavior scenarios, a manipulation check was also conducted in the present study. All teachers in this study (N = 543) indicated on a 7-point scale how easy it was to imagine themselves in each of the four misbehavior situations. Again, mean results ($\bar{X} > 6.0$) substantiated the perceived realism of each scenario across grade level by experienced teachers.

[2]Because available power analytic techniques exclude multivariate designs, no estimates are reported for the MANOVAs employed in the present study. Estimates for all regression-type ANOVAs were greater than .995 for a medium effect at alpha = .05 and a sample of 500. Power estimates for all contrasts conducted were greater than .995 for a medium effect size at alpha = .05.

[3]All correct assignments of male and female teachers to groups were interpreted to be beyond chance expectations (prior probabilities = 50%). Random split-sample reliablity checks of the originally derived discriminant functions confirmed the cross-validational stability of the four 2-group gender categorizations.

Figure 1.
Student Misbehavior Scenarios

Passive/Severe

Situation 1: *Linda is completely turned off by school. She sits passively in class each day, making little or no effort to participate in class or do homework. How likely would you be to employ each of the following strategies in order to get Linda to more actively contribute and work on class assignments?

Active/Moderate

Situation 2: Jim loves to chatter with his friends any time he gets the chance. His talking frequently interrupts class lessons and distracts others. How likely would you be to employ each of the following strategies to get Jim to work constructively on the class assignment?

Active/Severe

Situation 3: Pam is typically restless and overactive in class. She dominates the class by asking a lot of questions and seems argumentative. Her behavior is often distracting to you, the class, and the task. How likely would you be to employ each of the following strategies in order to get Pam to settle down and work constructively in class on the assignment?

Passive/Moderate

Situation 4: Mike fails to pay attention to your lectures and instructions. He doesn't disturb others, but neither does he listen actively to you. Instead, he may be writing notes, doodling, or daydreaming. How likely would you be to employ each of the following strategies to get Mike to pay attention and work on the task?

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*In order to rotate student gender roles, each scenario was rewritten to substitute Bill for Linda, Virginia for Jim, Tim for Pam, and Carolyn for Mike.

Table 1

BATs	BAMs
1. Immediate Reward from Behavior	You will enjoy it. It will make you happy. Because it's fun. You'll find it rewarding/interesting. It's a good experience.
2. Deferred Reward	It will help you later on in life. It will prepare you for college (or high school, job, etc.). It will prepare you for your achievement tests. It will help you with upcoming assignments.
3. Reward from Teacher	I will give you a reward if you do. I will make it beneficial to you. I will give you a good grade (or recess, extra credit) if you do. I will make you my special assistant.
4. Reward from Others	Others will respect you if you do. Others will be proud of you. Your friends will like you if you do. Your parents will be pleased.
5. Self-Esteem	You will feel good about yourself if you do. You are the best person to do it. You are good at it. You always do such a good job. Because you're capable!
6. Punishment from Behavior	You will lose if you don't. You will be unhappy if you don't. You will be hurt if you don't. It's your loss. You'll feel bad if you don't.
7. Punishment from Teacher	I will punish you if you don't. I will make it miserable for you. I'll give you an "F" if you don't. If you don't do it now, it will be homework tonight.
8. Punishment from Others	No one will like you. Your friends will make fun of you. Your parents will punish you if you don't. Your classmates will reject you.

9. Guilt	If you don't, others will be hurt. You'll make others unhappy if you don't. Your parents will feel bad if you don't. Others will be punished if you don't.
10. Teacher/Student Relationship: Positive	I will like you better if you do. I will respect you. I will think more highly of you. I will appreciate you more if you do. I will be proud of you.
11. Teacher/Student Relationship: Negative	I will dislike you if you don't. I will lose respect for you. I will think less of you if you don't. I won't be proud of you. I'll be disappointed in you.
12. Legitimate-Higher Authority	Do it, I'm just telling you what I was told. It is a rule, I have to do it and so do you. It's a school rule. I'ts school policy. The principal said so.
13. Legitimate-Teacher Authority	Because I told you to. You don't have a choice. You're here to work! I'm the teacher, you're the student. I'm in charge, not you. Don't ask, just do it.
14. Personal (Student) Responsibility	It is your obligation. It is your turn. Everyone has to do his/her share. It's your job. Everyone has to pull his/her own weight.
15. Responsibility to Class	Your group needs it done. The class depends on you. All your friends are counting on you. Don't let your group down. You'll ruin it for the rest of the class (team).
16. Normative Rules	We voted, and the majority rules. All of your friends are doing it. Everyone else has to do it. The rest of the class is doing it. It's part of growing up.
17. Debt	You owe me one. Pay your debt. You promised to do it. I did it the last time. You said you'd try this time.

18. Altruism	If you do this it will help others. Others will benefit if you do. It will make others happy if you do. I'm not asking you to do it for yourself; do it for the good of the class.
19. Peer Modeling	Your friends do it. Classmates you respect do it. The friends you admire do it. Other students you like do it. All your friends are doing it.
20. Teacher Modeling	This is the way I always do it. When I was your age, I did it. People who are like me do it. I had to do this when I was in school. Teachers you respect do it.
21. Expert Teacher	From my experience, it is a good idea. From what I have learned, it is what you should do. This has always worked for me. Trust me - I know what I'm doing. I had to do this before I became a teacher.
22. Teacher Feedback	Because I need to know how well you understand this. To see how well you can do it. It will help me to know your problem areas.

Table 2
Means and Frequency Percentages for Perceived Use on Each of the Four Misbehavior Scenarios

BAT*	Passive-Severe			Active-Moderate			Active-Severe			Passive-Moderate		
		Use %			Use %			Use %			Use %	
	$\bar{X}$	High	Low	$\bar{X}$	High	Low	$\bar{X}$	High	Low	$\bar{X}$	High	Low
1	4.37	53	32	4.15	48	37	4.16	48	37	4.55	55	29
2	4.57	60	29	4.19	48	36	4.13	46	37	4.55	58	28
3	3.95	45	41	3.67	37	47	3.79	39	44	3.96	45	41
4	3.82	29	41	3.94	39	38	4.07	45	36	3.90	41	39
5	5.62	80	10	5.30	71	13	5.16	69	17	5.38	75	11
6	2.50	13	74	2.75	17	68	2.71	18	71	2.82	22	68
7	2.33	15	77	2.52	18	73	2.42	17	74	2.20	13	80
8	1.53	2	94	1.93	8	85	2.04	9	82	1.73	6	90
9	2.18	7	82	2.72	18	67	2.71	16	70	2.36	13	77
10	3.41	32	53	3.46	33	53	3.40	31	53	3.28	31	55
11	1.61	3	93	1.80	7	88	1.79	6	90	1.71	6	90
12	2.74	18	69	2.80	20	69	2.77	18	69	2.51	15	74
13	2.52	14	74	2.84	22	67	2.92	22	64	2.54	16	73
14	3.90	41	41	3.98	38	40	4.02	43	39	3.79	38	44
15	4.01	41	36	4.29	50	29	4.28	48	32	3.94	42	39
16	3.34	28	54	3.68	35	45	3.66	34	45	3.33	28	51
17	2.16	8	81	2.14	9	81	2.16	10	80	2.15	10	81
18	3.84	38	44	4.25	48	34	4.19	35	33	3.70	36	46
19	4.46	29	51	3.87	39	42	3.82	36	41	3.73	34	43
20	2.69	17	70	2.80	17	67	2.85	19	65	2.94	21	62
21	4.04	46	38	3.75	38	45	3.78	41	43	3.86	41	41
22	5.52	79	11	5.13	71	18	5.06	69	19	5.38	76	13
Overall	3.41	31.7	54.3	3.45	33.2	51.9	3.40	32.7	51.9	3.40	32.8	53.4

*See Table 1 for category labels.

Table 3
BAT Use by Active/Passive Misbehavior Type

BAT	Means*		F-Ratio**
	Active	Passive	
1	8.89	8.28	8.15
2	9.10	8.30	13.93
3	7.91	7.45	4.52
5	10.98	10.46	10.11
7	4.53	4.96	4.77
8	3.26	3.96	24.03
9	4.53	5.42	26.88
11	3.32	3.59	3.96
13	5.04	5.77	12.91
15	7.95	8.58	11.56
16	6.69	7.37	12.36
18	7.55	8.44	22.39
19	7.22	7.71	7.16
22	10.88	10.16	14.96

*Because Ss responded to two active and two passive scenarios, response totals ranged from 2 (least used) to 14 (most used).

**All significant at $p<.05$ with 1/1063 df.

Table 4

Mean Perceived BAT Use by Grade Level

	Passive-Severe						Active-Moderate					
BAT	K-3	4-6	7-9	10-12	Other	F-ratio	K-3	4-6	7-9	10-12	Other	F-ratio
1	4.8_{abcd}	4.2_{a}	4.2_{b}	4.1_{c}	4.0_{d}	4.16	---	---	---	---	---	---
2	4.1_{ab}	4.5	5.0_{a}	5.0_{b}	4.6	4.36	3.8_{a}	4.2	4.6_{a}	4.3	4.0	3.30
3	4.4_{abc}	4.0	3.7_{a}	3.5_{b}	3.8_{c}	4.20	4.2_{abc}	4.0_{de}	3.2_{ad}	3.2_{bc}	3.4_{c}	7.84
4	4.0_{abc}	4.3_{def}	3.5_{ad}	3.4_{be}	3.4_{cf}	5.68	4.1	4.4_{abc}	3.8_{a}	3.6_{b}	3.6_{c}	3.71
5	---	---	---	---	---	---	5.6_{ac}	5.6_{de}	5.1_{ad}	4.9_{ce}	5.1	4.14
6	2.3_{de}	2.7_{ad}	2.7_{be}	2.6_{c}	1.9_{abc}	3.75	---	---	---	---	---	---
7	2.1_{de}	2.7_{ad}	2.6_{be}	2.3_{c}	1.6_{abc}	4.00	2.2_{ab}	2.8_{ac}	2.9_{bd}	2.5	2.1_{cd}	3.13
8	1.3_{ab}	1.8_{a}	1.6_{b}	1.5	1.4	3.36	1.6_{abc}	2.1_{a}	2.1_{b}	2.0_{c}	1.9	3.96
9	1.8_{ab}	2.6_{acd}	2.4_{b}	2.1_{c}	2.1_{d}	7.87	2.2_{abcd}	3.0_{a}	2.9_{b}	2.8_{c}	3.0_{d}	6.43
11	1.4_{de}	1.7_{a}	1.8_{bd}	1.8_{ce}	1.3_{abc}	3.39	1.5_{abc}	1.9_{a}	2.0_{b}	1.9_{c}	1.8	2.60
12	2.4_{ab}	3.0_{ac}	2.9_{bd}	2.8	2.4_{cd}	3.27	---	---	---	---	---	---
13	2.3_{d}	2.7_{a}	2.8_{bd}	2.7_{c}	1.9_{abc}	3.10	2.5_{a}	2.9_{b}	3.4_{abcd}	2.8_{c}	2.3_{d}	5.42
16	---	---	---	---	---	---	3.5_{a}	4.1_{abc}	3.8	3.6_{b}	3.2_{c}	2.58
17	1.9_{de}	2.3_{a}	2.3_{bd}	2.4_{ce}	1.8_{abc}	2.92	1.8_{abc}	2.3_{a}	2.4_{b}	2.3_{c}	1.9	3.57
20	2.5_{a}	3.1_{ab}	2.8	2.4_{b}	2.5	2.76	2.7_{d}	3.1_{ad}	2.9_{b}	2.8_{c}	2.2_{abc}	2.69
21	---	---	---	---	---	---	3.6	4.0_{ab}	4.0_{cd}	3.5_{ac}	3.3_{bd}	2.58

Table 4 (Continued)

	Active-Severe						Passive-Moderate					
BAT	K-3	4-6	7-9	10-12	Other	F-ratio	K-3	4-6	7-9	10-12	Other	F-ratio
2	---	---	---	---	---	---	4.2_{a}	4.6	4.9_{a}	4.6	4.7	2.87
3	4.2_{abc}	4.2_{def}	3.5_{ad}	3.0_{be}	3.5_{cf}	8.33	4.4_{ab}	4.2_{cd}	3.7_{ac}	3.2_{bd}	3.8	6.29
4	4.2_{ac}	4.4_{bd}	3.8_{ab}	3.6_{cd}	3.9	3.41	---	---	---	---	---	---
5	5.6_{abe}	5.4_{cd}	4.9_{ac}	4.7_{bd}	5.0_{e}	5.63	5.6_{ab}	5.5_{c}	5.2_{a}	5.0_{bc}	5.4	2.87
7	2.2_{a}	2.5	2.8_{abc}	2.4_{b}	2.1_{c}	3.10	2.1	2.5_{a}	2.3_{b}	2.1	1.7_{ab}	2.44
8	1.7_{ab}	1.3_{ac}	2.4_{bd}	2.0	1.8_{cd}	4.70	1.5_{ab}	1.9_{ac}	2.1_{bde}	1.6_{e}	1.4_{cd}	5.98
9	2.4_{ab}	3.0_{ac}	3.0_{bd}	2.5_{cd}	2.5	3.68	---	---	---	---	---	---
10	---	---	---	---	---	---	3.2_{ab}	3.7_{acd}	3.4_{e}	3.0_{c}	2.6_{bde}	3.53
12	2.7_{a}	2.8_{b}	3.1_{c}	2.6	2.0_{abc}	2.92	2.3_{a}	2.7_{c}	2.7_{ab}	2.5	1.9_{bc}	2.97
13	2.7_{a}	3.1_{c}	3.4_{ab}	2.9	2.2_{bc}	4.23	2.2_{ab}	2.7_{a}	2.9_{bc}	2.6	2.1_{c}	3.76
14	---	---	---	---	---	---	3.6_{c}	3.9_{a}	4.2_{bc}	3.8	3.2_{ab}	3.24
15	4.3_{a}	4.5_{b}	4.3_{c}	4.3_{d}	3.6_{abcd}	2.49	---	---	---	---	---	---
16	3.6_{a}	4.0_{ab}	3.7_{c}	3.7	3.1_{bc}	2.45	---	---	---	---	---	---
17	1.9_{ab}	2.3_{a}	2.3	2.4_{bc}	1.8_{c}	2.59	1.8_{abc}	2.3_{ad}	2.3_{be}	2.3_{cf}	1.6_{def}	4.20
19	---	---	---	---	---	---	3.6_{a}	4.1_{abc}	4.0_{d}	3.4_{bd}	3.4_{c}	3.01
20	---	---	---	---	---	---	2.8_{a}	3.5_{abcd}	3.0_{b}	2.7_{c}	2.8_{d}	3.96
21	3.6_{ab}	4.1_{ac}	4.1_{bd}	3.5_{cd}	3.5	2.66	---	---	---	---	---	---

Note: Row means with same subscript are significantly different, $p < .05$ ($df=4/530$ for each F). Analyses for BATs which were nonsignificant are not reported.